The first Montana Territorial Legislature in 1864-1865 passed a fishing regulation which stated - a rod or pole, line and hook shall be the only lawful way trout can be caught in any of the streams of the Territory. The same bill prohibited the baiting of a hook with any drug or poisonous substance and also prohibited the use of seines or nets. The law became effective on February 2, 1865.

The office of State Fish and Game Warden was created on April 1, 1901. Between May 20 and May 28 of that year, 8 deputy wardens were sworn in. The deputies had to travel over large areas of Montana and received a salary of $100.00 per month. This salary covered all travel and travel expenses.

The first State Fish and Game Warden pointed out in his report the importance of fish and game resources to the economy of the State. Eastern capitalists and wealthy non-resident sportsmen, he stated, were rapidly becoming aware of all that Montana had to offer. He warned too, that there was a serious lack of game protective laws. Montana would do well, he said, to profit from the experience of some of the older states and should not "wait until the horse is stolen to lock the gate".

Time has supported well the prediction that non-residents were becoming aware of the fine fishing and hunting to be found in Montana. A recent survey showed out-of-state visitors made a very significant contribution to the income of the Department.

The years since 1902 have seen the lack of protective measures remedied with a veritable complex of fishing and hunting regulations. Only in relatively recent years has there been some liberalization of harvest where conditions of the range indicate the need.

Lake Sewell, the present site of Canyon Ferry Reservoir, was stocked with largemouth bass in 1902. The yellow perch which had been introduced into the lake a few years earlier, were reported to be thriving. A few trout, about 3000 fry, were obtained from the U. S. Fish Hatchery at Bozeman. These trout were planted in the North Fork of the Sun River above the falls. The Bozeman station was under the supervision of Dr. James Henshall.

There was a very definite need for a state fish hatchery in Montana to maintain sport fishing. The stocked fish would help to make up for the high losses of fish to irrigation canals and ditches. These fish losses prompted Dr. Henshall in 1904 to develop and describe an inexpensive paddle-wheel type of fish excluder that could be installed in irrigation ditches. The paddle-wheel was designed to eliminate the difficulties experienced with plugged screens and washed out headgates.

Although the Department threatened to discontinue the stocking of fish in any stream that had irrigation ditches without fish excluders, very few of the paddle-wheels were ever installed.

Fry plants made by the Bozeman Fish Hatchery into state waters in 1903 and 1904 were as follows:

Species	1903	1904
Brook Trout	95,000	100,000
Rocky Mountain Trout	400,000	600,000
Steelhead Trout	50,000	25,000
Mackinaw Trout	2,000	6,000
Grayling	1,500,000	2,500,000
Rainbow Trout	40,000	20,000
Lake Superior Whitefish	800,000	

Montana businesses received an estimated $60,000 in 1904 from non-resident sportsmen.

The plants of fry from the Bozeman station were said to be responsible for keeping Montana streams from being entirely depleted of fish. This observation gave considerable support to the request for a state fish hatchery. The complete cost of a hatchery would amount to $5,000.00.

It was about this time that water pollution made its initial recorded appearance. Cyanide mine wastes were reported to be causing severe fish losses and the Department recommended the use of settling ponds to alleviate the problem.

Still working toward a state fish hatchery, it was reported in the 1905-1906 biennial that "the state would be almost devastated of fish if not for the U. S. Fish Hatchery at Bozeman". The $5,000.00 required to build a hatchery was available from Fish and Game Funds.

It was perhaps a combination of political and personal reasons that prompted Senator W. A. Clark to build a private fish hatchery at Columbia Gardens in Butte in 1905. Certainly the providing of fish would not be intended to dissuade Montana voters. At any rate, the fish from the Columbia Gardens Hatchery were turned over to the Butte Anglers Club who, in turn, had the Deputy Game Warden distribute them to suitable waters. This program was cited as an example of the excellent spirit of cooperation existing between the sportsmen and the Department.

Enthusiastic bass fishermen of 1905 and 1906 were catching seven pound fish from Echo Lake in Flathead County. Lake Sewell, near Helena, was producing one and one-half pound bass from the plant made in 1902. While bass were reported doing well in these waters, it was stated that this fish was unsuited for the waters of eastern Montana. This observation remains generally true today; however, because bass have aeen available, and because no good substitute could be provided, bass have continued to be planted in eastern Montana ponds. Only in the last few years have some of the cool water ponds been stocked with trout. Success of these trout plants have been generally excellent.

To protect fish from over-exploitation, the State Fish and Game Warden recommended in 1909 that fishing be prohibited for a distance of 300 feet below existing dams. Fish congregated in these areas and were extremely vulnerable to fishermen. It was also proposed at this time that there should be no winter fishing and that trout limits should be set at 25 pounds per day with a possession limit of 50 pounds. There were actually no fishing restrictions in 1909; all a fisherman needed was a license which at that time cost him $1.00.

Anaconda was the site of Montana's first state fish hatchery. Construction of the station was completed in 1908. By 1909 it was reported that production of fish at Anaconda had already made a noticeable increase of fishing in Montana streams. It was expected that by 1910, the Anaconda Fish Hatchery would take about one million brook trout eggs from stock originally obtained from Rhode Island. Brook trout planted in Georgetown Lake by the Anaconda station were beginning to come to the spawning beds in large numbers.

In addition to the State Hatchery and the Federal Hatcheries, there were several private hatcheries that were planting and restocking Montana streams.

It was noted that although a million more black-spotted trout fry were planted than formerly, it was difficult to observe the results since these fish were found naturally in large numbers.

Fairly large plants of Lake Superior whitefish were being made in Flathead Lake where there were great expectations for this fine fish. Here was a species that was proven in the Great Lakes waters, was a desirable fish with good commercial possibilities. There actually was a brief period of commercial fishing for Lake Superior whitefish on Flathead Lake sometime around 1915 as nearly as residents of the area at that time can recall. Apparently it was difficult to adequately supervise the netting of whitefish and the numbers of trout taken created opposition from many of the anglers.

Plants of grayling in 1909 were said to be successful in Georgetown Lake, the Bitterroot River, the Flathead River and the Yellowstone River. Grayling reached a weight of two pounds in two years in Georgetown Lake. A later report discounted the grayling success in the Bitterroot River.

In a 1910 statement of future policy it was reported that rainbow trout and steelhead trout were to be planted only in isolated reservoirs.

The second state fish hatchery was completed on the shore of Flathead Lake, near Somers,in 1912. This station was expected to produce some three million trout fry and from 8 to 10 million whitefish fry the following year.

General improvements were made at the Anaconda fish hatchery in 1912 and that year the station planted 600,000 grayling fry; 16,350 rainbow trout fry; 1,299,200 brook trout fry; and 2,424,500 cutthroat trout fry - a total of 4,340,050. Prior to 1911, accurate records of hatchery production were not kept. It was reported, however, that the fry planting program was thoroughly successful as was evidenced by the excellent fishing available in Georgetown Lake.

In 1912 Dr. Elrod of the State University biological department explored some Montana waters for the stocking of fish. This project was the first instance of cooperation between the Fish and Game Department and the University system. This is at present a well established program, helping to train students working toward wildlife degrees and accomplishing a large amount of management work.

It was also in 1912 that 20,000 brook trout were planted in the previously barren Upper Two Medicine Lake. Some doubt was expressed as to the advisability of stocking rainbow trout; these fish were said to be quite cannibalistic.

The position of Hatchery Superintendent was created and filled in 1913. The new superintendent reported that 15 million fry were liberated from the Anaconda and Somers stations in 1913 and 1914. He stated that the large losses the hatcheries were experiencing in the transportation of green eggs had been overcome by eyeing the eggs at the spawning stations.

The ACM Company helped with some development work on the springs at the Anaconda station and general improvements were made at the Somers hatchery. Both Anaconda and Somers received a Ford motor car and Somers, in addition, an electric light plant and a 31-foot boat. The boat would be used to haul cans of fish fry from the hatchery to the town of Somers where they would be loaded on railroad cars for distribution. A remodeled railroad car was purchased by the Department in 1913 for $6,000.00. The unit was equipped with insulated tanks capable of carrying over 130 cans of fish.

Records for 1914 state briefly that kokanee were first introduced that year into Flathead Lake.

In 1918 it was recommended that a new railroad fish distribution car be purchased at a cost of from $25,000 to $50,000. The old remodeled car purchased in 1913 had traveled a great many miles, had received hard use, and was unsafe.

Bowdoin Lake, near Malta, was being fished with nets for carp in 1917 and 1918 to provide a cheap source of meat.

The U. S. Government installed fish traps at Willow Creek on the Madison River to take rainbow trout, cutthroat trout and grayling eggs. The state received a part of the eggs taken.

Introductions of new species showed marked success as, for example, the rainbow trout in Georgetown Lake. Some success was also reported from the plants of chinook salmon planted in the Clearwater Lakes in April of 1917. Fish measuring 13 to 16 inches were being caught by July of 1918. These salmon resulted from eggs purchased in 1916 from Bonneville, Oregon.

In 1918, while seining in Lake Ronan for brook trout to spawn, a strange fish was reported taken. These fish were finally identified as blueback salmon. Apparently these fish came from the 1916 eggs purchased from Oregon. The eggs had been mixed in with the chinook salmon eggs. The State of Oregon was very interested in these blueback salmon since they had for some time been attempting to develop stocks in Oregon waters without success.

It was reported that the Bitterroot River was inhabited by cutthroat trout, whitefish, squawfish and suckers. Numerous species had been planted - brook trout, rainbow trout, steelhead trout and grayling. No grayling survived and very few of the other introduced species were being caught.

Future plans at this time included (1) the compilation of a list of all lakes, streams, and rivers; showing the kinds of fish, the character of the water, the sources of pollution, the number and time of fry plants and the results of the plants.

(2) the instruction of all clubs and individuals involved in planting fish as to the proper methods of fry planting, (3) the stimulation of interest in breeding or holding ponds.

The Somers station in 1918 planted 4,400,000 trout fry; 500,000 Lake Superior whitefish, and 1,000,000 Rocky Mountain whitefish.

Planning was under way in 1918 to cooperate with the Forest Service in introducing fish into barren waters located on the forests.

Some thought was being given to the possibility that there were antagonistic species of fish such as the brown trout and the Dolly Varden trout. The predatory brown trout, which had been planted a few years earlier in the Madison River by the Federal Service, was becoming quite numerous. According to reports from Michigan, Iowa, and Colorado, the brown trout was particularly dangerous to the grayling.

It was reported that the earliest record found of brown trout propagation was in 1902, when a small number were hatched and distributed from the Northville Station in Michigan, the Manchester Station in Iowa, and the Leadville Station in Colorado. One account stated that in 1899 some fingerling brown trout were placed in the pond located on the Hoffman Ranch near Bozeman. Brown trout from this pond weighed up to 6 pounds in 1903.

In discussing the planting program, the Superintendent of Fisheries pointed out that while there were advantages to planting larger fingerling fish, the cost of raising them and distributing them was high. He stated that the three varieties of fish considered best for Montana were cutthroat, rainbow trout, and grayling.

The fish hatchery at Somers was having trouble with the landowners situated above the station. Cattle were trampling the springs and causing silt problems in the hatchery. There was a very distinct possibility of the need of a new hatchery site. The same problem and solution exists at the present time.

Fry plants made in 1917 and 1918 were as follows:

Species	1917	1918
Brook trout	3,884,500	4,552,000
Rainbow trout	1,294,800	1,529,000
Cutthroat trout	4,321,000	3,470,000
Grayling	1,300,000	2,965,000
Rocky Mt. Wf.	240,000	750,000
Lake Superior Wf.		475,000
Silver salmon	822,700	4,998

In 1921 the department expended a considerable amount of time and effort on the very popular program of rescuing and distributing bass and sunfish stranded by Flathead River floodwaters. Many waters in the Flathead area received bass and sunfish from the rescue program during this period.

In 1922 state fish hatcheries were constructed at Big Timber, Lewistown, Great Falls, and Red Lodge. At Missoula the feeding ponds were being used and facilities were maintained at Lake Mary Ronan, Flint Creek and Ashley Lake. The Department at this time operated a total of 12 units.

It was the stated policy of the Department in 1923 to build a number of small hatcheries throughout the state and in this manner, reduce the cost of distribution. Forty years later large, new distribution units and good highways have reversed this early policy. It is possible at present to transport large numbers of fish over considerable distances with very little loss.

The population of brown trout was reported building up in the Missouri River between Logan and Great Falls. Excellent catches of walleyes were being made in Nelson Reservoir near Malta. In winter netting operations, commercial seiners took some 11 carloads of carp from Nelson Reservoir for shipment to New York. The department planned to charge the fishermen 15% of gross receipts for the carp and looked forward to receiving about $2,000 annually. It was reported that catfish transferred to Nine Pipes Reservoir from Nelson Reservoir during seining operations were producing excellent results.

The department was looking forward to hiring a qualified biologist in 1923, yet it was nearly 25 years later before a fisheries biologist was actually employed.

For better survival of planted fish, it was proposed that future plants should be fingerling fish rather than fry. The need was expressed too, for the propagation of warm water fish for the waters of eastern Montana.

In 1923 and 1924 combined plants of fry totalled 43,513,718. These fish were distributed from 12 units in the state. Included in the plants were all species of trout, whitefish, salmon, bass, sunfish, perch, bullhead, and catfish.

It was pointed out in 1925 that the fish displays at fairs throughout the state were well received. The cities of Helena and Billings had fine aquariums for fish display.

Sportsmen were calling the bull trout the cannibal of Montana streams yet there was strong objection to the removal of these fish with nets.

Montana's fish hatchery problem at this time was only that of distribution.

The Yellow Bay Biological Research Station on Flathead Lake, the first in the U.S., was established in 1927 in cooperation with Montana State University. This unit would study fish life and fish food organisms in Flathead Lake.

Construction of fish ponds for rearing warm water fish was started at Miles City in July of 1927.

The Fish and Game Commission reported in the 1931 and 1932 biennial that the rearing pond program which had been receiving considerable emphasis, actually had proved to be of little value generally; only a few of the better ponds had showed favorable results. It was hoped the ponds completed on Beaver Creek near Havre in 1931 and put in operation in 1932 would make it possible to rear larger fish for planting in the Bear Paw area waters.

In 1931, the Emigrant Fish Hatchery which had been constructed in 1919, was moved across the Yellowstone River to its present site. At the Libby hatchery a dwelling and garage were completed. It was noted also that the Fisheries Division purchased a new Chevrolet coupe for $681.87.

A total of approximately 26 million fry were planted from 14 station in 1931. Several stations were added to the hatchery system this year - Philipsburg, Polson, Miles City, Libby; however, lack of sufficient water at the Missoula feeding ponds forced the department to abandon this facility.

Golden trout were first planted in the state in 1931. Warm water fish produced at Miles City consisted of bass, sunfish, crappie, and perch. Several plants of brook trout were made in the Red Lodge - Cooke City area in the spring of 1931 and substantial plants were planned for 1932. The Big Hole River in 1931 was becoming a very popular fishing stream. The new highway from Helena to Great Falls had just opened up a lengthy stretch of the Missouri River and it was hoped this would benefit Montana anglers. Experimental work was done this year in an attempt to develop a plant to utilize carp and suckers from Lake Helena for fish food.

Theeconomic condition of the thirties was reflected in department receipts. In 1931 the department received $223,655.08. The 1932 receipts dropped to $179,644.14.

Large numbers of suckers and squawfish were reported in the Clearwater Lakes. It was planned to attempt in 1932 to develop trout fishing in these lakes and fill a long-felt need. Plans also included the establishment of a fish hatchery some 35 miles north of Missoula. This hatchery would replace the Missoula feeding ponds abandoned because of a lack of water in 1931.

Department revenue continued to decline in 1933 with the general depression. The drought of this period dried up many fine trout streams and there was considerable activity in fish rescue and fish salvage operations.

For a cost of $4,500 the department acquired title in 1933 to the Daly Fish Hatchery at Hamilton. The original cost of the installation in 1918 was $30,000.

Circular ponds were constructed at the state fish hatcheries in Great Falls, Anaconda and Somers in accordancewith the recommendations of the Commission that hatchery installations be improved. Cabins were constructed at Flint Creek, and the large pond at Big Timber was completed. Some development work was done on the springs above the hatchery at Somers so that more water could be accumulated. A

large part of the improvement work done during this period was made possible through the program of the Civil Works Administration.

At the Georgetown Lake spawning traps, 48 tons of suckers were removed in 1933; in 1934 there were 74 tons taken out. The traps in Duck Creek, in the South Fork of the Madison River, and in the main Madison River produced nearly 5 million brown trout eggs in 1933.

A stream improvement program for the state was proposed at this time; however, it was felt that it would be well to classify the streams of the state before any improvement work was done.

Kokanee were now showing up well in the Flathead Lake fishery. In 1933 a processing plant in Polson canned 21,000 cans of kokanee for distribution to the needy of the state.

Recommendations were still being made as they had been for some 30 years, to provide irrigation ditches with screens. Fish losses to the ditches were reported to be very high.

Much credit had been given to sportsmen over the years for their assistance in the distribution of fish. Difficulties apparently developed under this system for in 1933 an about face was made with the recommendation that any planting or transplanting of fish by sportsmen should be made illegal.

Fish distribution in 1934 was aided by the addition of a spray type aeration system installed in a new fish truck at the Anaconda station. This system was said to be much superior to the old oxygen system.

The number of improvements and developments at the state fish hatcheries, with considerable assistance from the WPA Program, created a housing need for an assistant foreman. Help was needed at the station in helping to care for the fish, the ponds, and the newly landscaped grounds.

At Montana State College in 1934, Dr. C. J. D. Brown gave a short course in fishery management principles. The course was attended by many of the state hatchery personnel.

A pilot stream improvement program was carried out on the West Fork of Rock Creek near Philipsburg. A system of log dams and deflectors was built and installed under the direction of Dr. Clarence Tarzwell who had initiated the program in the State of Michigan.

The Maiden Rock Hatchery was operated in 1934 by the Butte Anglers Club whose President at that time was Mr. William Carpenter.

The recommended building and improvement at the fish hatcheries was carried on through the next several years and was reflected in increased hatchery expenditures through 1939.

It was estimated in 1942 that Montana had a total of 34,000 miles of fishing streams and 1550 lakes. These waters were being stocked from 11 state fish hatcheries and 3 federal hatcheries operating under a newly devised 5-year distribution plan. This plan was designed to make the best and most efficient use of the hatchery system and prevent the overlap of fish planting. The plan contained the best information available from the game wardens, the Forest Service, and local residents. Undesirable plants were eliminated from the schedule. The production of fish at each of the hatcheries was carefully evaluated as to the numbers and size that could be produced and allocations were made to the waters to be stocked. As many large fish as possible would be produced consistent with facilities and funds. The 5-year plan was a very major step forward in coordinating hatchery plants in the state.
It was during this period that there was a turning toward a generally better fisheries management program. Hatcheries planned to operate more efficiently. Refrigeration units proposed at the various stations would improve fish feeding methods, larger fish distribution units would bring costs down, processing of rough fish for use at state installations was to be investigated, and a research department was to be established. There were, at this time, approximately 10 million each of rainbow, cutthroat and brown trout being raised annually, however, this total would be cut somewhat in raising larger fish.

In the year prior to 1942, a total of 29 fish screens had been installed in various irrigation ditches. These screens had cost the department about $800.00 each, plus a yearly maintenance of about $150.00 per year. As of 1942, only three of these screens were still in operation.

There was hope that the newly developed chemicals which could be used to eradicate rough fish would become available for use in state waters. Also being considered at this time was the fertilization of low production mountain lakes.

The statement was made in the 1943-1944 biennial report that the low wages being paid by the department made it extremely difficult to keep personnel for more than a very short time. The general result of this high rate of labor turnover was a poor quality of hatchery help. At the same time, fish distribution units, which could not be replaced because of the war, were in very poor condition. There was a general need for new equipment in the hatchery system. Little development was actually carried out during the biennium. Purchase of the Arlee Fish Hatchery which had been leased by the department for several years was arranged and some work was done on the ponds. The actual purchase of the station was completed in March of 1945.

Refrigeration was being installed at several of the state fish hatcheries for the storage of fish food. A pike hatchery was built at Nelson Reservoir near Malta with the assistance of Phillips County sportsmen and development work was done on the McNeil Slough near the hatchery.

A rough fish control program was being considered and it was recommended that provisions be made for the issuance of commercial fishing licenses by the department. Another recommendation a t this time was the formation of from 8 to 10 supervisory districts in the state.

July 1, 1947, marked the establishment of the fisheries biological section. A trained fisheries biologist was hired to head the section and, recognizing that hatcheries were the keystone of the Fisheries Division, some of the objectives of the section were listed. Among these were assistance in helping the fish hatcheries develop improved fish distribution methods, the providing of scientific data, studying methods of planting fish, doing some fish tagging and tag return studies, examination of growth rates and condition of Montana fish, and the outlining of a creel census program.

This same year the department hired an engineer to help with the many construction problems with which it was faced.

A new hatchery building and a brood pond were constructed at the Arlee station and a new pipeline was installed at the Anaconda hatchery to help the station meet its proposed production figure of 450,000 fish, 4 to 6 inches in length. Worn out vehicles and equipment were being replaced as new material became available. General improvements were made at most of the state fish hatcheries.

Cooperative funds were being provided at this time to the Federal fish hatcheries at Creston, Ennis and Miles City for the release of additional fish in the state.

By 1949 work was progressing on age and growth studies, food studies, and creel census. This year two new fish distribution units were purchased by the state.

The 1951-1952 biennium marked 50 years of department existence and progress. It was estimated that in 1951, fishermen spent a total of $9,397,700; of this amount, nonresident fishermen spent $875,250.

A hatchery biologist was hired in 1951 to help in the control of fish diseases and to help in the development of suitable fish diets at the various state fish hatcheries. This year also concrete tanks were installed at the Hamilton station and a duplex residence for hatchery personnel was constructed at the Anaconda hatchery.

A fish management policy based on a scientific approach was adopted in 1953. From a strictly economic viewpoint it was proposed that: (1) Fry and fingerling trout should be used where practical. (2) Fish of all sizes should be liberated at such times and in such manner as to insure the greatest possible return to the creel. (3) Fish should be liberated only where needed for management, and only where a reasonable return to the creel could be assured.

It was emphasized that fish should be planted only: (1) Where there were no game fish present or where an introduced species would be more desirable. Once introduced, natural reproduction should adequately support sport fishing. (2) Where waters had no, or inadequate spawning grounds. (3) Where heavy fishing pressure warrants. (4) To re-establish fish.

A study of the effects of irrigation practices showed fish losses to the ditches could be reduced through the removal of pools in the ditches, cutting away the brush along ditch banks, and decreasing the flows in the ditches gradually rather than cutting off the flow at once.

In 1955 the rehabilitation of the Marias River Drainage was the major project carried out. Undesirable fish were eradicated in some 600 miles of river and tributaries prior to the closure of Tiber Dam. Species to be eliminated above the dam were carp and goldeyes. The goldeye is still absent above the dam and although there are some carp in these waters, they are far from being as numerous and as widely distributed as they were prior to the rehabilitation.

The Flint Creek test stream was initiated in 1955 to test the quality of hatchery fish, the effects of transporting fish various distances, and the effects of various fish diets.

Costs of hatchery operations in fiscal 1955 was $323,929.88; making the 15,153,516 fish, weighing 142,830.9 pounds, average $2.03 per pound or 4½ cents per fish.

In fiscal 1956 costs averaged $1.77 per pound or 2 cents per fish with a production of 22,606,786 fish weighing 131,444.4 pounds.

During the 1957-1958 biennium the department continued the program of stream surveys throughout the state, rehabilitation of waters containing undesirable populations of fish, and evaluation of the hatchery program. That larger fish were being utilized was evidenced by the increase in the number of pounds produced, 465,506.5 pounds, and the lesser number of 18,848,299.

The Statewide Stream Classification was prepared in 1959 through the cooperative effort of the department, the MRBS, and Montana State College. This project did much to clear up the misconception that Montana had unlimited amounts of excellent fishing streams. Actually there were only 410 miles of top quality "blue ribbon" streams in the state.

The expansion of the Lewistown fish hatchery was completed in 1959, taking advantage of an excellent supply of ideal spring water and a central Montana location.

Also, this same year hatching methods were being improved through studies and experiments carried out at the Arlee hatchery. Most of the state fish hatcheries installed the new fiber glass troughs - these represented a considerable saving in man power since the troughs were easily cleaned and required no painting.

The 1960-1962 biennium saw considerable emphasis on the maintenance of fish habitat. The damaging effects of channel changes on fish populations were measured on 13 representative streams in the state. Feeling was strong enough that the State Legislature passed a bill which gave the Fish and Game Department a voice in preserving habitat from detrimental construction.

Mountain lake survey received a big assist with the acquisition of a helicopter. The helicopter has made it possible to obtain, in a relatively short time, information on a number of lakes that have been accessible only by pack outfit - lakes that would have taken many days to reach by pack string were surveyed in a matter of hours by use of the helicopter.

The effects of silt on fish populations in a stream were shown dramatically in a study on Bluewater Creek near Bridger. Trout thrived and reproduced excellently above silty return flows to the stream - below the silt laden inflows only a few suckers were able to survive.

Hatchery improvements included expansion and construction of brood trout facilities at the Arlee fish hatchery making it one of the most modern in the nation, a new water line at the Bluewater station, new drains and roadway around the ponds at the Great Falls hatchery, piping Lehman Spring to the lower unit at the Lewistown station and other minor improvements of a general nature to keep the hatchery system operating efficiently.

Plans for the future will aim toward an increased effort in habitat preservation, development of healthy brood stocks of both westslope and Yellowstone cutthroat trout and the production of high quality fish to stock Montana waters where stocking is required.

W. Elwood